

REMARKS

In the non-final Office action dated February 2, 2009, it is noted that the Applicants' request for continued examination filed on December 22, 2008 under 37 CFR 1.114 has been entered and the finality of the previous Office action dated August 20, 2008 has been withdrawn.

Claims 1-11 are pending in the application. Claims 1, 8, 9, and 11 constitute all independent claims. Claims 1 and 8-10 have been amended to clarify certain aspects of the subject matter. Claims 1, 8, and 9 include certain features from dependent claim 2 as originally filed. No new matter has been added. Claims 2 and 11 have been cancelled.

A Replacement Sheet (Related Art Fig. 22) is attached herewith to replace the previously filed drawing sheet Fig. 22.

Objection to the Drawings

The Office action objected to Fig. 22 under MPEP 608.02(g) "Illustration of Prior Art," alleging only that which is old is illustrated. Applicants hereby replace the previously filed drawing sheet Fig. 22 with a Replacement Sheet Fig. 22 labeled, "Related Art." As such, Applicants respectfully submit that Fig. 22 is in compliance with MPEP 608.02(g) and respectfully request the withdrawal of the objection to the drawings.

Objection to the Specification

The Office action objected to the specification in connection with the objection to the drawings. As noted above, Applicants hereby replace the previously filed drawing sheet Fig. 22 with a Replacement Sheet Fig. 22 labeled, "Related Art." As such, Applicants respectfully submit that Fig. 22 is in compliance with MPEP 608.02(g) and respectfully request the withdrawal of the objection to the specification.

Claim Rejections under 35 U.S.C. §112

Claims 8, 9, and 11 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter, specifically with regard to the limitation “wherein each of a plurality of nodes retains respective management information.”

Claims 8 and 9 have been amended to clarify certain aspects of the subject matter. For example, claims 8 and 9 recite, “wherein each terminal node of the plurality of terminal nodes retains respective management information.” Applicants respectfully submit that there is sufficient antecedent basis for the features of claims 8 and 9 and thus they are not indefinite. Claim 11 has been cancelled. As such, Applicants respectfully request the withdrawal of the rejection to claims 8, 9, and 11 under 35 U.S.C. §112, second paragraph.

Claims 1, 8, 9, and 11 also stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention, specifically with regard to the term “related” node.

Claims 1, 8 and 9 have been amended to clarify certain aspects of the subject matter. For example, the term “related” has been amended in claims 1, 8, and 9. Claim 11 has been cancelled. Thus, it is respectfully submitted that the rejection to claims 1, 8, 9, and 11 under 35 U.S.C. §112, second paragraph, should be withdrawn.

Claim Rejections under 35 U.S.C. §102/103

Claims 1, and 3-7 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Willars et al. (US 7,072,329), hereinafter Willars. Claims 2, and 8-11 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Willars, or in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over Willars.

Applicants respectfully traverse these rejections.

Independent claims 1, 8, and 9 include several similar features. In view of this similarity and for the sake of brevity for this response, the following remarks will be addressed to claim 1, but should be understood to pertain as well to claims 8 and 9.

Applicants' claim 1 recites, in relevant part, the features of:

wherein each intermediate node of the plurality of intermediate nodes transfers user data received from any node located from within the mobile communication network, including a top node, an intermediate node, or a terminal node, or received from a different network and addressed to the mobile communication network, by use of a broadcast format to the plurality of terminal nodes, in which the user data is further transmitted to a mobile station subordinate to and managed by the terminal node of interest, based on the management information retained by the terminal node of interest. Emphasis added.

Applicants' claim 1 is directed to a mobile communication system wherein each terminal node retains management information of a mobile station and wherein user data is transmitted to the mobile station subordinate to and managed by a terminal node of interest, based on the management information retained by the terminal node of interest. In other words, the mobile station is managed by a terminal node, based on management information retained by that terminal node.

Page 9 of the Office action alleges that Willars at Fig. 2B and column 9, lines 1-6, discloses the emphasized features of claim 1 (which formerly was a feature of dependent claim 2 as originally filed). Applicants respectfully submit that Willars at Fig. 2B and column 9, lines 1-6 is completely different from claim 1 and do not disclose "managed by the terminal node of interest, based on the management information retained by the terminal node of interest," as recited in claim 1.

Willars at Fig. 2B appears to disclose a Universal Mobile Telecommunications System (UMTS) network diagram in which user equipment (UE) 30 is in communication with a base station 28-1-1. The base station 28-1-1 seems to be interconnected to interworking node 50B, which appears to be interconnected with Radio Network Controller (RNC) 26-1. The RNC 26-1 seems to be interconnected with the core network service nodes 16. Willars at column 9, lines 1-6 appears to disclose the different types of control channels that may exist between the RNC 26-1 node and the UE 30. For example, a general broadcast channel, a paging channel, a common pilot channel and a forward access channel for providing various other types of control

messages to the UE 30. This is completely different from Applicants' claim 1. While Willars apparently discloses that the RNC may retain management information of a respective mobile station, the RNC in Willars' disclosure is clearly not a terminal node. Willars apparently discloses methods for combining differing transport technologies in conventional telecommunications system such as UMTS and Asynchronous Transfer Mode (ATM), where the management data is retained at the top or intermediate nodes of the radio access network. This is in complete contrast with Applicants' claim 1, which requires, "a mobile station subordinate to and managed by the terminal node of interest, based on the management information retained by the terminal node of interest." Nowhere does Willars disclose, teach or even suggest that the mobile station is managed by the terminal node based on management information retained by the terminal node. Thus, it is understood that Willars fails to teach and does not make obvious all features of Applicants' claim 1.

Furthermore, Applicants' claim 1 requires: "a plurality of intermediate nodes layered in a tree-shape connection structure and provided between the top node and the terminal nodes, the tree-shape connection structure having a network structure in which there is no redundant routes for IP packet flow to each terminal node of the plurality of terminal nodes." Emphasis added. This feature of the tree-shape connection structure having no redundant routes provides the advantage of preventing a user packet flow from potentially being looped. For example, when a user packet is broadcasted to the plurality of terminal nodes from a superordinate node, in the case of the user packet flow being looped, no user packet reaches the terminal nodes.

The Office action alleges, Response to Argument section, that the feature of the tree-shape connection structure having a network structure in which there is no redundant routes for IP packet flow to each terminal node is disclosed by Willars at Fig. 2B; column 9, lines 31-45; column 9, line 66-column 10, line 9; and column 8, lines 44-46. The Office further alleges that "there are only control signaling interfaces."

Applicants respectfully request the Office provide some authority or reference which shows that there are only control signal interfaces, because this is not what Willars describes. Willars describes in col. 2, line 60 to col. 3, line 17 that the 3GPP R99 standards specifies the need to transport data between nodes of the RAN. Willars

goes on to describe examples including that the transport of data can be between two RNC nodes. The user data is described at col. 3, lines 4-8.

Furthermore, Willars describes at col. 4, lines 5-7 that Fig. 1 operates according to 3GPP R99 standards.

Additionally, col. 5, lines 31-46 includes a statement that: "Given the consideration that all RNC nodes *within* a radio network such as UTRAN should be able to reach each other" (emphasis added). Willars introduces the gateway 50 to solve this problem (see col. 10, lines 16-28) when there may be different type networks.

Thus, applicants respectfully submit that the "Response to Arguments" section in the Office Action is not supported by the disclosure of Willars and the knowledge of one ordinarily skilled in the art related to 3GPP. Willars does not teach, disclose or suggest a tree-shape network structure having "no redundant routes for IP packet flow to each terminal node," as recited in claim 1. Therefore, for the additional reasons as discussed above, Willars fails to teach and does not make obvious all features of Applicants' claim 1.

In light of the above remarks, it is submitted that claim 1 is allowable under 35 U.S.C. §102 and 35 U.S.C. §103. Withdrawal of this rejection is respectfully requested.

Independent claims 8 and 9, while different from claim 1, include several similar distinguishing features as discussed above with respect to claim 1. Applicants essentially repeat the above arguments for claim 1 and apply them to claims 8 and 9.

The dependent claims 3-7 and 10 incorporate by reference the allowable features in their respective parent claims in addition to further features in each dependent claim. Applicant essentially repeats the above arguments for each of the dependent claims. Claims 2 and 11 have been cancelled. Accordingly, withdrawal of the rejection of claims 1-11 is respectfully requested.

Conclusion

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if the Examiner should consider this application not to be in condition for allowance, the Examiner is invited to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-3894.

Respectfully submitted,

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